Commonwealth of Kentucky
Division for Air Quality

PERMIT STATEMENT OF BASIS

Conditional Major Draft Permit No. F-06-037
FOUR ROSES DISTILLERY, LLC
LAWRENCEBURG, KY 40342
September 8, 2006
ESMAIL HASSANPOUR, REVIEWER
SOURCE ID #: 21-005-00002
SOURCE AI #: 35
ACTIVITY ID #: APE20060001

SOURCE DESCRIPTION:

The Four Roses Distillery, LLC has applied to the Kentucky Division for Air Quality to renew their current permit, including only an Administrative Revision – Name Change. The source currently operates under its Permit F-98-007. There have been no process changes at the facility.

The Four Roses Distillery, LLC bourbon manufacturing source consists of the following emission points (EP): grain receiving and handling (EP-02), grain milling and handling (EP-03), spent grain handling (EP-05), small gas- fired 6.7 mmBtu boiler (EP-07), alcohol storage tanks (Insignificant Activities), larger gas fired 48 mmBtu boiler (EP-09), with back up #2 oil fired boiler, gas fired 13 mmBtu dryer (EP-10), spent grain load out (EP-11), two steam dryers (EP-12), fermentation-distillation-beerwell (EP-15), spent grain evaporators (EP-19), and grain cleaning (EP-23). The distillery is a continuous operation, 24 hours per day, 7 days a week.

COMMENTS:

Emission Point 002: The grain receiving, conveying, and storage includes: gravity unloading operation, screw conveyors and silos. This equipment was constructed and put into operation approximately 1988. Grain is unloaded on a weekly basis with daily throughput calculated on weekly hours of plant operations.

401 KAR 59:010, New Process Operations, applicable to an emission unit that commenced on or after July 2, 1975.

Pursuant to 401 KAR 59:010 Section 3(2), particulate matter emissions into the open air shall not exceed 3.15 pounds per hour based on a three-hour average.

Pursuant to 401 KAR 59:010, Section 3(1)(a), any continuous emission(s) into the open air shall not equal or exceed twenty (20) percent opacity based on a six-minute average.

Emission Point 003: Grain milling and handling includes: hammer mills, pneumatic conveyors and meal storage bins. This equipment was constructed and put into operation approximately 1988. Grain is processed on a weekly basis with daily throughput calculated on weekly hours of plant operations.

401 KAR 59:010, New Process Operations, applicable to an emission unit that commenced on or after July 2, 1975.

Pursuant to 401 KAR 59:010 Section 3(2), particulate matter emissions into the open air shall not exceed 3.15 pounds per hour based on a three-hour average.

Pursuant to 401 KAR 59:010, Section 3(1)(a), any continuous emission(s) into the open air shall not equal or exceed twenty (20) percent opacity based on a six-minute average.

Emission Point 005: Spent Grain Handling includes: hammer mill, and conveyors. The equipment was constructed and put into operation approximately 1970. Grain is processed on a weekly basis with hourly throughput calculated on weekly hours of plant operations.

401 KAR 61:020, Existing process operations, for units commenced before July 2, 1975.

Pursuant to 401 KAR 61:020 Section 3(2), particulate matter emissions into the open air shall not exceed 1.68 pounds per hour based on a three-hour average.

Pursuant to 401 KAR 61:020, Section 3(1)(a), any continuous emission(s) into the open air shall not equal or exceed forty (40) percent opacity based on a six-minute average.

Emission Point 007: Gas-Fired indirect heat exchanger (boiler) rated at 6.7 mmBtu/hour. The equipment was constructed and put into operation approximately 1988. Natural Gas is the only fuel source.

401 KAR 59:015, New indirect heat exchangers, for units less than 250 mmBtu/hour commenced on or after April 9, 1972.

Pursuant to 401 KAR 59:015, Section 4(1)(c), particulate emissions shall not exceed 0.13 lb/mmBtu based on a three-hour average.

Pursuant to 401 KAR 59:015, Section 4(2), emissions shall not exceed 20% opacity based on a six-minute average, except a maximum of 40% opacity, based on six minutes average, shall be permissible for not more than 6 consecutive minutes in any consecutive 60 minutes during cleaning the fire-box or blowing soot.

Pursuant to 401 KAR 59:015, Section 5(1)(c), the sulfur dioxide emission rate shall not exceed 0.79 lb/mmBtu, based on twenty-four hour average.

Emission Point 009: Natural Gas and #2 fuel oil- fired indirect heat exchanger (boiler) rated at 48.1 mmBtu/hour. The equipment was constructed and put into operation approximately 1995.

401 KAR 59:015, New indirect heat exchangers, for units less than 250 mmBtu/hour commenced on or after April 9, 1972.

401 KAR 60:005, incorporating by reference 40 CFR 60, Subpart Dc, Standards of performance for small industrial-commercial-institutional steam generating units, for units less than or equal to 100 mmBtu/hour but greater than or equal to 10 mmBtu/hour commenced after June 9, 1989

Pursuant to 401 KAR 59:015, Section 4(1)(c), particulate emissions shall not exceed 0.13 lb/mmBtu based on a three-hour average.

Pursuant to 401 KAR 59:015, Section 4(2) and 40 CFR 60.43c(c), emissions shall not exceed twenty (20) percent opacity based on a six-minute average except a maximum of twenty seven (27) percent opacity (six minute average) for not more than one six (6) minute period per hour is allowed.

Pursuant to 401 KAR 59:015, Section 5(1)(c), the sulfur dioxide emission rate shall not exceed 0.27 lb/mmBtu, based on twenty-four hour average.

Emission Point 010: Spent grain rotary dryer rated at 13 mmBtu/hour. The equipment was constructed and put into operation approximately 1995.

401 KAR 59:010, New Process Operations, applicable to an emission unit that commenced on or after July 2, 1975.

Pursuant to 401 KAR 59:010 Section 3(2), and particulate matter emissions into the open air shall not exceed 1.84 pounds per hour based on a three-hour average.

Pursuant to 401 KAR 59:010, Section 3(1)(a), any continuous emission(s) into the open air shall not equal or exceed twenty (20) percent opacity based on a six-minute average.

Emission Point 010: Spent grain rotary dryer rated at 13 mmBtu/hour. The equipment was constructed and put into operation approximately 1995.

Pursuant to 401 KAR 59:010 Section 3(2), and particulate matter emissions into the open air shall not exceed 1.84 pounds per hour based on a three-hour average.

Pursuant to 401 KAR 59:010, Section 3(1)(a), any continuous emission(s) into the open air shall not equal or exceed twenty (20) percent opacity based on a six-minute average.

Emission Point 011: Spent grain product bin and load out. The equipment was constructed and put into service approximately 1970.

Pursuant to 401 KAR 63:010 Section 3, no person shall cause or permit the discharge of visible fugitive dust emissions beyond the lot line of the property on which the emissions originate. In addition, reasonable precautions shall be taken to prevent particulate matter from becoming airborne. The materials processed at each unit listed above shall be controlled with wet suppression and/or enclosures so as to comply with the standards specified in Section 3 of 401 KAR 63:010, Fugitive emissions. Compliance is demonstrated when daily observations indicate no visible fugitive dust emissions extend beyond the property line and that the processes and controls are operating normally. Observations and records, if applicable, shall be utilized to document failure to comply.

Emission Point 012: Two spent grain rotary dryers. These are steam heated indirect heated dryers. The equipment was constructed and put into service approximately 1970.

Pursuant to 401 KAR 61:020 Section 3(2), particulate matter emissions into the open air shall not exceed 2.16 pounds per hour based on a three-hour average.

Pursuant to 401 KAR 61:020, Section 3(1)(a), any continuous emission(s) into the open air shall not equal or exceed forty (40) percent opacity based on a six-minute average.

Emission Point 015: Fermentation, distillation (stills), and beer wells. Fermentation tanks are wood and stainless steel construction. Stills are heated by either direct or indirect steam. The equipment was constructed and put into service approximately 1945.

Emission Point 019: Spent grain processing/evaporators/spent stillage. The equipment was constructed and put into service approximately 1970.

Emission Point 023: Grain cleaning. The equipment uses a screen type grain cleaner with fabric filters. The equipment was constructed and put into service approximately 1996.

401 KAR 59:010, New Process Operations, applicable to an emission unit that commenced on or after July 2, 1975.

Pursuant to 401 KAR 59:010 Section 3(2), particulate matter emissions into the open air shall not exceed 3.15 pounds per hour based on a three-hour average.

Pursuant to 401 KAR 59:010, Section 3(1)(a), any continuous emission(s) into the open air shall not equal or exceed twenty (20) percent opacity based on a six-minute average.

Insignificant Activities: Alcohol Storage Tanks. Equipment consists of 6 outdoor stainless steel storage tanks equipped with conservation venting. The equipment was constructed and put into service approximately 1997 and 1999.

EMISSION AND OPERATING CAPS DESCRIPTION:

The source shall be limited to emissions less than 90 tons per year of any regulated air pollutant, to preclude the applicability of 401 KAR 52:020. The grain processed/handled shall not exceed 37,770 tons per year and the Bourbon produced shall not exceed 6,387,500 proof gallons per year.

CREDIBLE EVIDENCE:

This permit contains provisions, which require that specific test methods, monitoring or recordkeeping be used as a demonstration of compliance with permit limits. On February 24, 1997, the U.S. EPA promulgated revisions to the following federal regulations: 40 CFR Part 51, Sec. 51.212; 40 CFR Part 52, Sec. 52.12; 40 CFR Part 52, Sec. 52.30; 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12, that allow the use of credible evidence to establish compliance with applicable requirements. At the issuance of this permit, Kentucky has only adopted the provisions of 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12 into its air quality regulations.